

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A branched polylactic acid derivative of formula (1) for forming micelles in an aqueous solution with a pH of 4 or more:

I-(R-X)_n (1)

Wherein,

R is $-\left[R_1\right]_k-\left[R_2\right]_m-$,

wherein R_1 is $-C(=O)-CH_2-O-$,

R_2 is selected from the group consisting of $-C(=O)-CH_2-O-$, $-C(=O)-CH_2CH_2CH_2CH_2O-$ and $-C(=O)-CH_2-O-CH_2CH_2O-$, wherein each of Z and Y is selected from the group consisting of hydrogen, methyl, and phenyl,

k is an integer of 1-30,

m is an integer of 0-30;

X is $-C(=O)-(CH_2)_a-C(=O)-O-M$, wherein a is an integer of 0-10, M is selected from the group consisting of hydrogen, sodium, potassium, and lithium;

I is selected from the group consisting of diol and polyol having 3-12 hydroxy group s;

n is an integer of 2-12, and is the same as the number of hydroxy groups that I has, and wherein I is selected from the group consisting of ethylene glycol, propanediol, butanediol, pentanediol, hexanediol, glycerol, erythritol, threitol, pentaerythritol, xylitol, adonitol, sorbitol, mannitol, disaccharide and trisaccharide, and wherein the branched polylactic acid derivative has a number average molecular weight of 1,000-18,000 Dalton.

Claim 2 (Cancelled)

3. (Original) The polylactic acid derivative according to claim 1, wherein R is mono polymer or copolymer which is one or more selected from the group consisting of lactide, glycolide, caprolactone, 1,4-dioxane-2-one, and mandelic acid.

4. (Original) The polylactic acid derivative according to claim 1, wherein M is sodium, potassium or lithium.

5. (Previously Presented) The polylactic acid derivative according to claim 1, wherein the disaccharide is selected from the group consisting of palatinose, maltose monohydrate and maltitol, and the trisaccharide is D-raffinose pentahydrate.

Claim 6 (Cancelled)

7. (Currently Amended) A method of preparing the polylactic acid derivative according to any one of claims 1 and 3 to 5, comprising the steps of:

- 1) polymerizing a monomer of lactides in the presence of an initiator and a catalyst to obtain a branched polylactic acid;
- 2) dissolving the branched polylactic acid obtained in step 1) in a water-miscible organic solvent, purifying the branched polylactic acid by adding an aqueous solution with a pH of 7 or more, and drying in vacuum, to obtain a powder form of the branched polylactic acid; and
- 3) reacting the branched polylactic acid derivative obtained in step 2) with succinic anhydride or a dichloride compound to obtain the branched polylactic acid derivative containing terminal carboxy group, wherein the initiator of step 1) is selected from the group consisting of ethylene glycol, propanediol, butanediol, pentanediol, hexanediol, glycerol, erythritol, threitol, pentaerythritol, xylitol, adonitol, sorbitol, mannitol, disaccharide and trisaccharide, and wherein the branched polylactic acid derivative has a number average molecular weight of 1,000-18,000 Dalton.

8. (Previously Presented) The method according to claim 7, further comprising the step of adding an alkali metal salt to the branched polylactic acid derivative obtained in step 3) to obtain the branched polylactic acid derivative containing carboxy alkali metal salt terminal group.

9. (Previously Presented) The method according to claim 7, wherein the disaccharide is

selected from the group consisting of palatinose, maltose monohydrate and maltitol, and the trisaccharide is D-raffinose pentahydrate.

10. (Previously Presented) The method according to claim 7, wherein in step 3, the branched polylactic acid derivative is reacted with a compound which is selected from the group consisting of succinic anhydride, oxalyl chloride, malonyl chloride, succinyl chloride, glutaryl chloride, adipoyl chloride, sebacoyl chloride, and dochecadioyl dichloride.

11. (Previously Presented) The method according to claim 8, wherein the alkali metal salt is selected from the group consisting of sodium hydrogen carbonate, sodium carbonate, potassium hydrogen carbonate, potassium carbonate, and lithium carbonate.

12. (Currently Amended) A composition for a poorly, water-soluble drug delivery agent, containing the polylactic acid derivative according to any one of claims 1 and 3 to 5.

13. (Currently Amended) A pharmaceutical composition containing the polylactic acid derivative according to any one of claims 1 and 3 to 5 and a poorly, water-soluble drug.

14. (New) The branched polylactic acid derivative of claim 1, wherein said branched polylactic acid derivative entrap drugs in the micelles by forming stable micelles in aqueous solution and solubilizing poorly water-soluble drugs within the micelles.